No. 8000069

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Cornell University Agricultural Experiment Station

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *seventeen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

ALFALFA

'Oneida'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington *this* 20th *day of* November *in the year of our Lord one thousand nine hundred and* eighty.

Attest:

Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Secretary of Agriculture

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: *See Reverse.*

FORM APPROVED
OMB NO. 40-R3822

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1a. TEMPORARY DESIGNATION OF VARIETY	1b. VARIETY NAME	FOR OFFICIAL USE ONLY
Iroquois PR I	Oneida	PV NUMBER 8000069
2. KIND NAME: Alfalfa	3. GENUS AND SPECIES NAME: Medicago sativa L.	FILING DATE 3/10/80 / TIME 12:00 A.M. (P.M.)
4. FAMILY NAME (BOTANICAL): Leguminosae	5. DATE OF DETERMINATION: 25 January 1980	FEE RECEIVED $ 500.00 / $ 275.00 / DATE 3/10/80 / 11/3/80

6. NAME OF APPLICANT(S)	7. ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*	8. TELEPHONE AREA CODE AND NUMBER
Cornell University Agricultural Experiment Station	New York State College of Agriculture & Life Sciences, Cornell Univ., Ithaca, New York 14853	607-256-5420

9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)*	10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION	11. DATE OF INCORPORATION
State Agricultural Experiment Station	New York	1888

12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS:

Royse P. Murphy, Professor Emeritus & Carl C. Lowe, Professor; Department of Plant Breeding & Biometry; Cornell University; Ithaca, NY 14853 Telephone 607-256-3101

13. **CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:**

- [X] 13A. Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*
- [X] 13B. Exhibit B, Novelty Statement.
- [X] 13C. Exhibit C, Objective Description of the Variety *(Request form from Plant Variety Protection Office.)*
- [X] 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? *(See Section 83(a). (If "Yes," answer 14B and 14C below.)* [X] YES [ ] NO

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?	14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED?
[X] YES [ ] NO	[X] FOUNDATION [ ] REGISTERED [X] CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? [ ] YES [X] NO *(If "Yes," give name of countries and dates.)*

15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? [ ] YES [X] NO *(If "Yes," give name of countries and dates.)*

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? [X] YES [ ] NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

7 March 1980
(DATE)

Theodore L. Hullar
Associate Director
(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)

FORM GR-470 (1-78)

08/9/E pmm

INSTRUCTIONS

GENERAL: Send an original copy of the application and exhibits, at least 2,500 viable seeds, and $500 fee ($250 filing fee and $250 examination fee) to U.S. Dept. of Agriculture, Agricultural Marketing Service, Livestock, Poultry, Grain and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. (See section 180.175 of the Regulations and Rules of Practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

ITEM

5 Give the date the applicant determined that he had a new variety based on (1) the definition in section 41(a) of the Act and (2) the date a decision was made to increase the seed.

13a Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.

13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.

13c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.

13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as, plant habit, plant color, disease resistance, etc.

14a If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. However, if the applicant specified "NO," he may change his choice. (See section 180.16 of the Regulations and Rules of Practice.)

15a See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.

13A. Exhibit A

Origin and Breeding History of the Variety

1. 'Oneida' originated from research in the Department of Plant Breeding and Biometry, Cornell University Agricultural Experiment Station, New York State College of Agriculture and Life Sciences, Cornell University, Ithaca, New York. The Department of Plant Pathology cooperated in the disease resistance aspects of the research program. Selection was for resistance to Phytophthora megasperma Dreschler, the causal organism of Phytophthora root rot. The research was initiated in 1973 at which time pathogenic isolates of the causal organism were identified in soils near Aurora, New York by M. Melissa Craven, Professor Roy L. Millar and the late Professor Otto E. Schultz. All selections were made from the cultivar, 'Iroquois', which had been released in 1965 by the above agricultural experiment station.

2. Parent plants were selected through Phytophthora root rot disease screenings in the greenhouse and growth chamber over several generations. The initial screening was done in 1973. Three to five cycles of screening were completed and polycross and 1-year self progeny tests were used in the latter cycles of screening. Final selection of parents for Oneida was made from the survivors of the final cycles of disease screening established in a standard field nursery. This selection was based on vigor, bacterial wilt resistance, Iroquois-type growth habit, freedom of foliage diseases, and dark green foliage color.

3. Nine hundred and ninety-one selected plants were interpollinated to produce the breeder seed of this variety.

4. The within variety stability is similar to that for 'Iroquois' except for reaction to the Phytophthora root rot disease and for flower color. See Exhibit C for disease reaction and flower color. The within variety uniformity and stability for other characters meets the requirements for alfalfa varieties such as Iroquois, Vernal and Saranac.

Amendment to Exhibit A

5. There are no distinct variants that are readily discernible over and above the variation that is normal for the cultivar as described in Exhibit C; that is, variation in disease reaction, growth habit and flower color.

13B. Exhibit B

Data Indicative of Novelty for 'Oneida'

'Oneida' is most similar to 'Iroquois' except for its resistance to the Phytophthora root rot disease caused by Phytophthora megasperma. Oneida also has fewer plants with variegated flowers, and is slightly higher in resistance to the bacterial wilt disease caused by Cornynebacterium insidiosum (McCull.) H. L. Jens. In the absence of the Phytophthora root rot disease 'Oneida' is most similar in yield and growth pattern to 'Iroquois'. In the presence of the disease 'Oneida' is distinctly superior to 'Iroquois' in vigor, green color, stand survival and persistence as determined in field plots supplemented with irrigation during the production season.

Other varieties known to us that are similar to 'Iroquois' and 'Oneida' include 'Narragansett' and 'Mark II'. 'Oneida' may be distinguished from them by its resistance to the Phytophthora root rot disease and much lower frequency of plants with variegated flowers.

FORM APPROVED, OMB NO. 40-R3712

FORM GR 470-32
(3/75)

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

EXHIBIT C

OBJECTIVE DESCRIPTION OF VARIETY

Alfalfa (Medicago sativa L. complex)

NAME OF APPLICANT(S)
Cornell University Agricultural Experiment Station

ADDRESS (*Street and No., or R.F.D. No., City, State, and Zip Code*)
New York State College of Agriculture and Life Sciences
Cornell University, Ithaca, New York 14853

VARIETY NAME OR TEMPORARY DESIGNATION
Oneida

FOR OFFICIAL USE ONLY
PVPO NUMBER 8000069

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. [0][8][9] or [0][9]) when number is either 99 or less or 9 or less.

NOTE: For single plant data a minimum of 100 plants is suggested

1. PRIMARY AREA OF ADAPTATION

[3] 1 = NORTHWEST 2 = NORTHCENTRAL 3 = NORTHEAST
4 = SOUTHEAST 5 = SOUTHWEST 6 = SOUTHERN PLAINS
7 = INTERMOUNTAIN

INDICATE AREA WHERE TEST WAS CONDUCTED. FURTHER EXPLANATION CAN GO IN COMMENTS AT THE END OF THE FORM.
[3] AREA TESTED

2. WINTER HARDINESS

[7] 1 = NON-HARDY (Mesa Sirsa) 3 = INTERMEDIATE NON-HARDY
5 = MODERATELY HARDY (Saranac) 7 = HARDY (Vernal)
9 = EXTREMELY HARDY (Norseman)

[3] AREA TESTED

[2] SOURCE OF INFORMATION: 1 = ANTICIPATED 2 = MEASURED

3. FALL GROWTH HABIT

[7] 1 = ERECT (Mesa Sirsa) 3 = SEMIERECT (DuPuits)
5 = INTERMEDIATE (Saranac) 7 = SEMIDECUMENT (Vernal)
9 = DECUMBENT (Norsement)

[3] AREA TESTED

4. RECOVERY AFTER FIRST SPRING CUTTING

[5] 1 = VERY FAST (Mesa Sirsa) 3 = FAST (Saranac) 5 = INTERMEDIATE
7 = SLOW (Vernal) 9 = VERY SLOW (Norseman)

[3] AREA TESTED

5. FLOWERING DATE (FIRST SPRING GROWTH)

[0][2] DAYS EARLIER THAN . . . . .
[0][1] DAYS LATER THAN . . . . .

[4] 1 = MESA SIRSA 2 = LAHONTAN
[3] 3 = SARANAC 4 = VERNAL
5 = NORSEMAN

[3] AREA TESTED

6. CROWN TYPE

[6] 1 = SPREADING ROOTS 3 = SPREADING RHIZOMES (Teton)
5 = BROAD (Vernal) 7 = INTERMEDIATE (Saranac)
9 = NARROW (Mesa Sirsa)

[3] AREA TESTED

7. PLANT COLOR

[4] 3 = DARK GREEN (Weevichek) 5 = GREEN (Vernal)
7 = LIGHT GREEN (Ranger)

[3] AREA TESTED

8. HAIRINESS

[ ][ ][ ] % PLANTS WITH PUBESCENT STEMS

[ ][ ][ ] % PLANTS WITH PUBESCENT PODS

9. POD SHAPE

[0][9][5] % PLANTS WITH TIGHT COILS

[0][0][5] % PLANTS WITH LOOSE COILS

[0][0][0] % PLANTS WITH SICKLE PODS (Less than 1 coil)

10. GIVE ITEM LENGTH FREQUENCY DISTRIBUTION FOR SUBMITTED AND 1 TO 5 STANDARD VARIETIES 1/

VARIETY NAME	STEM LENGTH FREQUENCY DISTRIBUTION 2/											AVERAGE STEM LENGTH
	0 – 5 mm. %	6 – 10 mm. %	11 – 15 mm. %	16 – 20 mm. %	21 – 30 mm. %	31 – 40 mm. %	41 – 50 mm. %	51 – 60 mm. %	61 – 70 mm. %	71 – 80 mm. %	81 + mm. %	
See attachment Exhibit C-1												

11. FLOWER COLOR 3/ (DETERMINE COLOR ON FRESHLY OPENED FLOWERS) SEE ATTACHMENT EXHIBIT C-2

73.5 % PURPLE 26.5 % VARIEGATED 00.0 % YELLOW 000 % CREAM 000 % WHITE

PER LETTER OF JUNE 27, 1980 DJB

12. DISEASE, INSECT, AND NEMATODE RESISTANCE: (Enter resistance of submitted and check cultivars. Circle check cultivars used.)

DISEASE	CULTIVAR	% RESISTANT PLANTS	AVG. SEVERITY INDEX (ASI)	ASI LSD .05	TEST, YEAR & LOCATION 4/
BACTERIAL WILT	(SUBMITTED) Oneida	63.5	1.34		average for 3 years 1977, 1978, 1979 University of Minnesota F. I. Frosheiser and D. K. Barnes
	(RES. CK.) VERNAL	43.1	1.89		
	(SUS. CK.) NARRAGANSETT	1.8	3.75	.21	
ANTHRACNOSE	(SUBMITTED)	Susc. DJB 8 SEPT 80 PER LETTER OF 4 SEPT 80			
	(RES. CK.) ARC				
	(SUS. CK.) SARANAC				
COMMON LEAF SPOT	(SUBMITTED)				
	(RES. CK.) RAMSEY				
	(SUS. CK.) RANGER				
DOWNY MILDEW	(SUBMITTED)				
	(RES. CK.) SARANAC				
	(SUS. CK.) KANZA				
PHYTOPHTHORA ROOT ROT	(SUBMITTED) Oneida	56.3	2.72		average for 3 years 1977, 1978, 1979 University of Minnesota F. I. Frosheiser and D. K. Barnes
	(RES. CK.) AGATE	46.6	2.89		
	(SUS. CK.) SARANAC	4.3	4.56	.26	
OTHER	(SUBMITTED)				
	(RES. CK.)				
	(SUS. CK.)				

1/ Preferred standards: Saranac, Vernal, Norseman, Lahontan, Mesa Sirsa. Twelve hours light at 25° C with 20,000 lux of cool white florescent; 2,000 lux of incandescent filament light and twelve hours darkness at 5°C.

2/ From cotyledonary node to tip of stem 20 days after planting.

3/ For further clarification consult USDA Agricultural Handbook No. 424.

4/ Give: The institution in charge of test, (2) year, and (3) location of test. Describe test procedure if it differs from procedure suggested in ARS-NC-19, September 1974.

12. DISEASE, INSECT, AND NEMATODE RESISTANCE: (Enter resistance of submitted and check cultivars. Circle check cultivars used.)

DISEASE	CULTIVAR	% RESISTANT PLANTS	AVG. SEVERITY INDEX (ASI)	ASI LSD .05	TEST, YEAR & LOCATION 4/
OTHER	(SUBMITTED)				
	(RES. CK.)				
	(SUS. CK.)				
OTHER	(SUBMITTED)				
	(RES. CK.)				
	(SUS. CK.)				
INSECT	**CULTIVAR**	**% SEEDLING SURVIVAL**	**AVG' SEVERITY INDEX (ASI)**	**ASI LSD .05**	**TEST, YEAR & LOCATION 4/**
PEA APHID	(SUBMITTED)	Susc.			
	(RES. CK.) KANZA	DOB 8 SEPT 80 PER LETTER OF 4 SEPT 80			
	(SUS. CK.) RANGER				
SPOTTED ALFALFA APHID	(SUBMITTED)	Susc.			
	(RES. CK.) KANZA	DOB 8 SEPT 80 PER LETTER OF 4 SEPT 80			
	(SUS. CK.) RANGER				
INSECT	**CULTIVAR**	**% DEFOLIATION**	**AVG. SEVERITY INDEX (ASI)**	**ASI LSD .05**	**TEST, YEAR & LOCATION 4/**
ALFALFA WEEVIL	(SUBMITTED)				
	(RES. CK.) ARK				
	(SUS. CK.) VERNAL				
INSECT	**CULTIVAR**	**% RESISTANT PLANTS**	**EMERGED ADULTS PER PLANT**	**EMERGED LSD .05**	**TEST, YEAR & LOCATION 4/**
ALFALFA SEED CHALCID	(SUBMITTED)				
	(RES. CK.) LAHONTAN				
	(SUS. CK.) SONORA				
INSECT	**CULTIVAR**	**% RESISTANT PLANTS**	**AVG. SEVERITY INDEX (ASI)**	**ASI LSD .05**	**TEST, YEAR & LOCATION 4/**
POTATO LEAF-HOPPER	(SUBMITTED)				
	(RES. CK.)				
	(SUS. CK.)				
OTHER	(SUBMITTED)				
	(RES. CK.)				
	(SUS. CK.)				

4/ Give: The institution in charge of test, (2) year, and (3) location of test. Describe test procedure if it differs from procedure suggested in ARS-NC-19, September 1974.

08/01/E PMV

12. DISEASE, INSECT, AND NEMATODE RESISTANCE: (Enter resistance of submitted and check cultivars. Circle check cultivars used.)

INSECT	CULTIVAR	% RESISTANT PLANTS	AVG. SEVERITY INDEX (ASI)	ASI LSD .05	TEST, YEAR & LOCATION 4/
OTHER	(SUBMITTED)				
	(RES. CK.)				
	(SUS. CK.)				
NEMATODE	**CULTIVAR**	**% RESISTANT PLANTS**	**INDEX (ASI)**	**ASI LSD .05**	**TEST, YEAR & LOCATION 4/**
STEM NEMATODE	(SUBMITTED)	Susc.			
	(RES. CK.) LAHONTAN	DUE 8 SEPT 80 PER LETTER OF 4 SEPT 80			
	(SUS. CK.) RANGER				
NORTHERN ROOT KNOT NEMATODE	(SUBMITTED)				
	(RES. CK.) NEV. SYN. XX				
	(SUS. CK.) LAHONTAN				
SOUTHERN ROOT KNOT NEMATODE	(SUBMITTED)				
	(RES. CK.) MOAPA 69				
	(SUS. CK.) LAHONTAN				
OTHER	(SUBMITTED)				
	(RES. CK.)				
	(SUS. CK.)				

13. INDICATE A VARIETY THAT MOST CLOSELY RESEMBLES THE VARIETY SUBMITTED FOR THE FOLLOWING CHARACTERS:

CHARACTER	VARIETY	CHARACTER	VARIETY
AREA OF ADAPTATION	Iroquois	PLANT HEIGHT	Iroquois
RECOVERY AFTER CUTTING	Iroquois	WINTER HARDINESS	Iroquois

REFERENCES

Barnes, D.K., and C.H. Hanson, An Illustrated Summary of Genetic Traits in Tetraploid and Diploid Alfalfa, ARS Technical Bul. 1370.
Barnes, D.K., et al, Standard Tests to Characterize Pest Resistance in Alfalfa Varieties. ARS-NC-19, September 1974.
Nittler, L.W., G.W. McKee, and J.L. Newcomer, Principles and Methods of Testing Alfalfa Seed for Varietal Purity. New York Agricultural Experiment Station Bul. 807.
USDA Agricultural Handbook No. 424.

COMMENTS

10. Fall Dormancy Trial 1979

Transplanted to field 21-22 May, harvested 25 July and 7 September, scored for regrowth 15 October. Plants scored 1 to 12*. Four replications of approximately 25 plants each.

	Variety	Mean rating	Number of Plants/Classification											
			1	2	3	4	5	6	7	8	9	10	11	12
Trial 1**	Oneida	3.32	7	14	31	24	9	6	0	0	0	0	0	0
	Iroquois	3.41	5	18	21	29	15	2	0	0	0	0	0	0
	Saranac	4.38	0	5	14	26	32	13	1	0	0	0	0	0
Trial 2**	Saranac	4.54	1	3	11	31	36	11	5	0	0	0	0	0
	Norseman	1.49	58	33	8	0	0	0	0	0	0	0	0	0
	Vernal	3.48	9	14	27	27	16	4	2	0	0	0	0	0
	Ranger	4.27	1	4	21	31	26	13	2	0	0	0	0	0
	Lahontan	4.66	0	3	10	36	28	15	8	0	0	0	0	0
	Mesa Sirsa	7.40	0	0	0	0	6	14	33	29	17	1	0	0

*Score 1 = 2 inches regrowth, each succeeding score is increased 2 inches to score 12 = 24 inches or more.

**Data from 2 trials is provided for a wider basis of comparison. Trials 1 and 2 were separate but adjacent trials handled exactly alike. The Saranac variety is a common standard between them. Courtesy D. R. Viands, Department of Plant Breeding and Biometry, Cornell University.

13C. Exhibit C-2

Flower Color

According to Agricultural Handbook No. 424

		Oneida	Iroquois
Purple or violet	Class 1	73.5%	57.4%
Variegated	Class 2.3 and 2.4	23.9	12.4
Variegated	Class 2.1, 2.2, 2.5, 2.6, 2.7, 2.8, 2.9	2.6	29.1
Cream	Class 3	0.0	0.7
Yellow	Class 4	0.0	0.3
White	Class 5	0.0	0.1
		100.0%	100.0%

13D. Exhibit D

Botany Description of the Variety

Oneida is typical of Medicago sativa except for the small percentage of plants with some degree of yellow-green variegation in flower color. The seed pods are coiled.

The growth characters are most similar to those of the cultivar, 'Iroquois'.

2-5-88

Telecon: Don. Viands (Cornell)

- The reaction of 'Oneida' to Fusarium wilt is R. The original indication of S in the application was made by Dr. Murphy prior to actual tests.

- Test Results:

	% Res.	Adj % Res.	ASI
Oneida	23.6	40	3.10
Agate (R)	31.4	54	3.02
Narragansett	5.6		

AB

New York State College of Agriculture and Life Sciences
a Statutory College of the State University
Cornell University
Department of Plant Breeding and Biometry
252 Emerson Hall, Ithaca, N. Y. 14853-1902
Telephone: 607-255-2180

April 20, 1988

Dr. Kenneth H. Evans
Plant Variety Protection Office
NAL Building, Room 500
10301 Baltimore Boulevard
Beltsville, Maryland 20705-2351

Dear Dr. Evans:

Your letter of 8 April 1988 to W. D. Pardee has been referred to me. The subject of this letter is a review of 'Oneida' alfalfa, Certificate 8000069.

Since the application for 'Oneida' was submitted, it has been included in the standard Fusarium wilt tests which Professor Viands conducts routinely in his breeding programs. Prior to this, 'Oneida' had never been tested for reaction to Fusarium wilt. It is clear from Dr. Viands tests that 'Oneida' is in the resistant category for reaction to Fusarium wilt and we now classify this cultivar as such. I hope this is satisfactory for your use.

Incidentally, we describe 'Mohawk', Certificate 8500078, today as moderately resistant to Fusarium wilt as a result of Dr. Viands' tests. This information is not in the official PVP application. Most of our breeding lines, which originate directly from 'Iroquois', have some level of resistance to Fusarium wilt. Information on the Fusarium Wilt tests is enclosed.

Sincerely,

Royse P. Murphy
Professor Emeritus of
Plant Breeding

RPM/cm
Enc.

Fusarium Wilt Evaluation
Courtesy D.R. Viands

	Average 2 Tests		
	ASI	**% Resistant**	**Category**
Oneida	2.4	33.1	R
Mohawk	3.1	20.9	MR
Moapa 69	2.1	43.2	HR
Agate	2.8	26.3	R
Narragansett	3.4	18.8	S
LSD P=.05	0.6	19.1	
CV (%)	16.1	41.3	